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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/772,130 Examiner Jason K. Lin	CHEN, JUN Art Unit 2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 June 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 and 25-38 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-16 and 25-38 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 February 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

1. This office action is responsive to amendment of application No. 10/772,130 filed on 06/13/2007. **Claims 17-24, 39, and 40** have been cancelled. **Claims 1-16, and 25-38** are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to **claims 1-16, 25-31, 32-38, and 39** have been considered but are moot in view of the new ground(s) of rejection.

Although a new ground of rejection has been used to address additional limitations that have been added to **claims 1, 9, 25, and 32**, a response is considered necessary for several of applicant's arguments since reference Jerding (US 6,738,932), will continue to be used to meet several claimed limitations.

On p.15, the applicant states that "the content and/or EPG 128 content representations do not include information pertaining to the particular type or location of an application for displaying a given type of content." That fact in the specifications is duly noted, however that fact is not claimed.

With respect to applicant's arguments on p.16, the applicant asserts that it is incorrect that "the service manager 29 operates in the same manner as the 'choosing' act recited in claim 9." The applicant further states a few reasons that span from the bottom of p.16 – all of p.17. These reasons will be addressed below. Jerding (US 6,738,982) will herein after be referred to as Jerding'982.

Reason#1:

The link definition is not part of the system application manager 29 or the application interface 27. The examiner disagrees that the link definition is not part of the application interface 27. The link definition is part of the application interface 27, because the HTML or XML interface generated to be displayed by application interface system 27, contains link definitions as part of the interface as taught in Col 3: line 66 – Col 4: line 12 of Jerding'982. The examiner agrees that the link definition is not part of the system application manager 29, however, it is utilized in part by the SAM 29 in the step of executing applications.

Reason#2:

"It is the use of the service named 'tuningSpace' that controls which application is launched when an associated selectable link label is chosen by a user." The examiner disagrees. It is true that a particular application is indicated to be launched by the actual link label chosen. However, this selection is passed to the DHCT 16 which uses the SAM service ID (this is the same as 'tuningSpace' that the applicant refers to) and the actual channel assigned to a desired service to activate a particular service or application, and also tables are maintained in the DHCT 16 which provide for determining the associated channels, services, IDs, descriptions, etc as taught in Col 7: lines 20-30 of Jerding'982. Therefore, controlling which applications are launched is determined by the DHCT, by looking up the particular service to launch from the table that is maintained. The SAM in the DHCT, from the tables maintained in the DHCT is able to identify the appropriate services, applications, etc to activate as taught in Col 7: lines 28-30 of Jerding'982. The tables are used to identify the

appropriate services, applications to transfer the API calls in order to activate them. Therefore, there is still a choosing step involved, because the SAM must be able to tell from the various applications, which application to transfer the API call to.

Reason#3:

"the system application manager 29 or the application interface 27, clearly does not control the selection of an application. Instead, each selectable link label and its associated link definition must include the relevant application that is used to display content after the selection of a given selectable link. Accordingly, Jerding does not disclose or suggest the 'choosing' act recited by rejected claim 9." Please see examiners response of Reason#2 above. If further clarification is needed, please also see Jerding (US 6,792,616) herein after referred to as Jerding'616, Col 10: lines 40-54 and Col 11: lines 39-57. This is also in examiner's rejection for the amended claims below. Jerding'616 further clarifies the operation of the SAM, in that when it is given a service ID, the appropriate application URL is extracted from a Service Table determining the appropriate application, and then, and only then does it launches the application.

With respect to applicant's arguments on p.18, the applicant asserts that the rejection is improper that "the service application manager 29 operates in the same manner as the 'virtual tuner' recited in claim 25. The applicant further states a few reasons that span from the bottom of p.18 – all of p.19. These reasons will be addressed below.

For the reasons stated that are the same as the ones above on p.16-17 see examiner's response for Reasons#1-3.

Further the applicant asserts that "Jerding does not disclose or suggest the 'virtual tuner' recited by rejected claim 25." Please see examiner's response stated in Reason#2-3 above, Jerding'982 teaches the virtual tuner recited, because it does in fact executes the appropriate application based on the selection of said content from the EPG. Also Jerding'616, which is used in the rejection of the amended claims further clarifies the operation of the SAM and the process of executing applications.

With respect to applicant's arguments on bottom of p.22, the applicant asserts that the rejection is improper that "the service application manager 29 operates in the same manner as the 'virtual tuner' recited in claim 32. The applicant further states a few reasons that span from p.22 – p.23. These reasons have been addressed in the examiner's response above. Please see examiner's response above, regarding applicant's arguments from p.18 – all of 19.

With respect to applicant's arguments on p.24, the applicant asserts that the rejection is improper that "the service application manager 29 operates in the same manner as the 'executing' recited in claim 1. The applicant further states a few reasons that span from the bottom of p.24 – top of p.26. These reasons have been addressed in the examiner's response above. Please see examiner's response above, regarding applicant's arguments from p.18 – all of 19.

For the reasons stated that are the same as the ones above on p.16-17
see examiner's response for Reasons#1-3.

Further the applicant asserts that "Jerdong does not disclose or suggest the 'executing' recited by rejected claim 25." Please see examiner's response stated in ReasonA#2-3 above, Jerding'982 teaches the execution recited, because the SAM does in fact run on the DHCT and handles execution of the appropriate applications based on responses formed utilizing EPG. Also Jerding'616, which is used in the rejection of the amended claims further clarifies the operation of the SAM and the process of executing applications.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 9, 11-14, 16, and 25-29** rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616.

Consider **claim 9**, Jerding'982 teaches a virtual tuner executed on a client (Col 3: lines 19-27 and Fig. 2 teaches a memory 34 that contains operation system 33 service application manager (SAM) 29 that handles the lifecycle of the applications including the definition, initiation, activation, etc. of applications), a method comprising:

receiving a selection made from a plurality of content using an EPG that is output by the client (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services supported by the DHCT. Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc. Col 4: line 67 – col 5: line 3 teaches receiving user input for a plurality of selectable link labels available for selection on display Fig.2, 21), wherein:

the EPG includes a representation of each said content (Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc);

each said content is provided for output by a respective one or more of a plurality of applications (col 5: lines 5-14 teaches after API calls are transferred to the desired application Fig.2, 25, the application executes and presents the designated service to the user on the display Fig.2, 21); and

at least one said content is television programming (Col 3: lines 29-35 teaches video programming such as HBO and CNN. Col 7: lines 31-43 teaches the service can be a channel such as NBC in a non-limiting example);

choosing one or more of the plurality of applications that, when executed, provide the selected content (Col 5: lines 5-14 teaches transferring the API call from the SAM to a desired application Fig.2, 25 and executing the application to present the service to the user on display Fig.2, 21; Col 7: lines 20-28); and

managing execution of the chosen one or more applications to output the selected content (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications; Col 7: lines 20-28).

Jerding'982 teaches maintaining tables for determining associated services, IDs, etc (Col 7: lines 28-30), but fails to explicitly teach the one or more of the plurality of applications listed in an application identification table for reference by the client.

In an analogous art Jerding'616 teaches, one or more of the plurality of applications listed in an application identification table for reference by a client (Col 11: lines 39-56; Col 10: lines 40-54).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Jerding'982s system to include one or more of the plurality of applications listed in an application identification table for reference by a client, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Consider **claim 11**, Jerding'982 and Jerding'616 teaches that the managing is performed in response to one or more events received from the EPG (Jerdig'982 - Col 7: line 40 – col 8: line 4 teaches displaying an underlying application in full screen mode and an email application overlaid on top [foreground] by the SAM Fig.2, 37 of the full screen mode application when a selectable link is activated [events]).

Consider **claim 12**, Jerding'982 and Jerding'616 teaches that the managing includes managing a lifecycle of the chosen one or more applications (Jerdig'982 - Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Consider **claim 13**, Jerding'982 and Jerding'616 teaches said content provided by a first said application is not compatible with a second said application (Jerdong'982 - Col 3: lines 44-48 teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

Consider **claim 14**, Jerding'982 and Jerding'616 teaches that the managing includes managing one or more windows (Jerdong'982 - Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content); and

at least one said window is utilized to display the selected content (Jerdong'982 - Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application

can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 16**, Jerding'982 and Jerding'616 teaches one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 9 (Jerdig'982 - Col 8: line 39 – col 9: line 14).

Consider **claim 25**, Jerding'982 teaches a client comprising: a processor (Col 8: line 39 – col 9: line 14 teaches that the executable instructions used to carry out operations and processes shown in the blocks of the invention can be fetched and executed on a computer-based system, processor-containing system, etc.);

a network interface, communicatively coupled to the processor, configured to provide a network connection to a wide area network (WAN) (Col 2: lines 58-61 teaches a communications interface [network interface] connected to a TAP Fig.1, 15. Col 2: lines 33-47 teaches a network made up of headend Fig.1, 11 connected through a network Fig.1, 20 to multiple DHCTs Fig.1, 16);

a output interface, communicatively coupled to the processor, configured to provide an output for rendering by a display device (Col 2: lines 51-54 teaches the DHCT may be a stand-alone unit that is coupled

to an external display Fig.2, 21. Col 5: lines 12-15 teaches executing the application and presenting the service to the user on display Fig.2, 21. It is inherent that there is an output interface from the stand-alone unit to the display); and

memory configured to maintain (Fig.2, 34):

a plurality of applications that are executable on the processor to provide an output of content on the output interface (Col 3: lines 35-48 teaches a plurality of applications that can be activated and/or executed by utilizing the computing resources in the DHCT Fig.2, 16. Applications that can be activated and/or executed include a watch TV application, pay-per-view application, etc. Col 7: lines 64-67 teaches an email application. Col 5: lines 12-14 teaches executing the application Fig.2, 25 and presenting the service to the user on the display Fig.2, 21), wherein at least one said content is television programming received at the network interface (Col 58-61 teaches the DHCT Fig.1, 16 communications interface receiving signals that include media such as video, audio, graphical and data information. Col 3: lines 28-35 teaches video programming such as HBO and CNN);

an EPG engine that is executable on the processor to provide an EPG for output on the output interface (Col 4: lines 34-41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches

selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc. Col 8: lines 39-47 teaches an HTML engine Fig.2, 31 that renders the HTML content, where these executable instruction codes are executed on a processor-containing system), wherein the EPG includes a plurality of representations of said content for selection (Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc); and

a virtual tuner that is executable on the processor to launch one or more said plurality of applications in response to selection of said content using the EPG (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications. Col 7: lines 20-28; *This is applicable to all executable applications resident on the client*). Jerding'982 teaches the DHCT maintaining tables for determining associated services, IDs, etc (Col 7: lines 28-30), but fails to explicitly

teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Jerding'982s system to include utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Consider **claim 26**, Jerding'982 and Jerding'616 teaches that the virtual tuner is further executable to terminate execution of the one or more said applications (Jerdig'982 - Col 3: lines 19-27 teaches service application manager (SAM) Fig.2, 29 that handles the lifecycle of applications on the system, including suspension and deletion of services).

Consider **claim 27**, Jerding'982 and Jerding'616 teaches that the virtual tuner is further executable to: manage one or more windows corresponding to the plurality of applications (Jerdong'982 - Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content); and

at least one said window includes a display of the selected said content (Jerdong'982 - Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 28**, Jerding'982 and Jerding'616 teaches the network interface is configured as a tuner for receiving one or more broadcasts of the television programming over the WAN (Jerdong'982 - Col 2: lines 58-61 teaches a communications interface for receiving media such as vide, audio, graphical and data information. Col 3: lines 28-35 teaches in a non-limiting example an application tuning to video programming that can be executed to view HBO or CNN. Col 5: line 18 –

col 6: line 15 teaches the uniform resource identifier scheme that defines the services executed by the user. Col 6: line 8-10 teaches an identifier for NBC network broadcast that can be displayed); and the WAN is configured as a broadcast network (Jerdong'982 - Col 2: lines 33-62 teaches a headend Fig.1, 11 receiving television signals and transmitting the signals over system Fig.1, 10. The headend is connected to multiple DHCTs Fig.1, 16 through network Fig.1, 20. The DHCT Fig.1, 16 receives media such as video, audio, etc. Fig. 1 displays the network for transmission of media from headend to user terminals [broadcast network]).

Consider **claim 29**, Jerding'982 and Jerding'616 teaches that the content provided by a first said application is not compatible with a second said application (Jerdong'982 - Col 3: lines 44-48 teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

5. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hoarty et al. (6,305,020).

Consider **claim 10**, Jerding'982 and Jerding'616 teaches launching the chosen one or more applications for outputting the selected said content (Jerdong'982 - Col 4: lines 67-14 teaches receiving user input selection from a plurality of available selectable link labels. The application is executed and presents the designated service to the user after the API calls are transferred from the SAM Fig.2, 29 and the operation system Fig.2, 23 to the desired application. Col 3: lines 19-27 teaches that the SAM Fig.2, 29 handles the initiation, activation of the application).

Jerdong'982 and Jerding'616 doe not explicitly teach terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG.

In an analogous art, Hoarty teaches terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down [termination] as described in col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982 and Jerding'616 to terminate the chosen one or more applications when the outputting is completed or an event is received from the EPG, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

6. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Knudson et al. (6,526,577).

Consider **claim 30**, Jerding'982 and Jerding'616 do not explicitly teach the WAN is the Internet.

In an analogous art, Knudson teaches a WAN is the Internet (Col 5: lines 34-50 teaches video signals, e.g. television programs, that is distributed over communications path Fig.2c, 20. Communications path 20 may be an Internet link).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982 and Jerding'616 to have the WAN as the internet, as taught by Knudson, for the advantage of providing programming to users that might otherwise be unable to receive programming over the air and do not have cable.

7. **Claims 15, 31, 32, 34-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hassell et al (2007/0033615).

Consider **claim 15**, Jerding'982 and Jerding'616 teaches the plurality of content includes remote content available over the Internet (Jerding'982 - Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches that such content can be any internet web content), but do not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982 and Jerding'616 to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider claim 31, Jerding'982 and Jerding'616 teaches the content includes remote content available over the WAN (Jerding'982 - Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches that such content can be any internet web content, or any other information source provided by the cable television system), but do not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982 and Jerding'616 to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 32**, Jerding teaches a system comprising:

- a network (Fig. 1, 20);
- a client communicatively coupled to the network (Fig. 1 and col 2: lines 46-47 teach a client Fig. 1, 16 coupled to the network Fig. 1, 20) and including:

 - one or more processors (Col 8: lines 39-47 teaches a processor-containing system that is used to execute instructions for implementing logical functions and any process descriptions or blocks in flow charts representing portions of code) and a plurality of applications that are executable thereon (Col 3: lines 35-48 teaches a plurality of executable applications) to provide at least one of local content and the remote content for rendering on a display device (Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc. Col 5: lines 10-15 teaches executing an application and presenting the designated service to the user on display Fig. 2, 21).
 - a guide application that is executable to generate an EPG from the remote EPG content that is configured to initiate one or more events (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services

supported by the DHCT. Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user. Col 4: line 67 – col 5: line 7 teaches receiving user input selection of one of the plurality of selectable link labels and forming a C-based API call after selection. Col 4: lines 8-12 teaches that the services can be any internet web content, or other information source provided by cable television system); and a virtual tuner that is executable to manage the plurality of applications in response to the one or more events (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21.. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications; Col 7: lines 20-28).

Jerding'982 teaches the DHCT maintaining tables for determining associated services, IDs, etc (Col 7: lines 28-30), but fails to explicitly teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more

applications to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Jerding'982's system to include utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Jerdong'982 and Jerding'616 do not explicitly teach an EPG provider communicatively coupled to the network and including remote EPG data that describes remote content that is available over the network, the remote content including television programming

In an analogous art, Hassell teaches an EPG provider communicatively coupled to a network and including remote EPG data that describes remote content that is available over the network, the remote content including television programming (Paragraph 0017-0019 teaches a program guide data source Fig.1, 14 [EPG provider] connected to a network. The EPG provider data is transmitted by main facility Fig.1, 12 includes television program listings data such as program times, channels, titles, and descriptions).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982 and Jerding'616 to include an EPG provider communicatively coupled to the network and including remote

EPG data that describes remote content that is available over the network, the remote content including television programming, as taught by Hassell, for the advantage of providing EPG data directly from a single source simplifying the amount of connections needed for the client.

Hassell further teaches local EPG data that describes local content (Paragraph 0038 teaches a programs listing that indicates currently stored programs on a storage device. Paragraph 0022 teaches that the storage device can be contained in set-top box Fig.2, 28);

a guide application that is executable to generate an EPG from local EPG content that is configured to initiate one or more events (Fig. 5b Paragraph 0038-0040 teaches an EPG containing programs from storage device and programs from outside sources. Paragraph 0041 teaches a user selecting a stored program listing and the EPG issuing commands in response to the selection).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982, Jerding'616, and Hassell to include local EPG data that describes local content and a guide application that is executable to generate an EPG from local EPG content that is configured to initiate one or more events, as further taught by Hassell, for the advantage of providing easy and organized access of stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 34**, Jerding'982, Jerding'616, and Hassel teaches the local EPG data is generated by the guide application by examining the client (Hassel - Paragraph 0038-0040 teaches displaying program listing data of programs currently stored on storage device. When a stored program is selected the program guide can further obtain more information associated with the listing from the storage device).

Consider **claim 35**, Jerding'982, Jerding'616, and Hassel teach that the content provided by a first said application is not compatible with a second said application (Jerding'982 - Col 3: lines 44-48 teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

Consider **claim 36**, Jerding'982, Jerding'616, and Hassel teaches the virtual tuner manages a lifecycle of each said application (Jerding'982 - Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Consider **claim 37**, Jerding'982, Jerding'616, and Hassel teaches the virtual tuner further manages one or more windows that include a display of at least one of the local and remote content (Jerding'982 - Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content. Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 38**, Jerding'982, Jerding'616, and Hassel teaches the EPG includes a plurality of representations, wherein at least one said representation represents the remote content and another said representation represents the local content (Hassel – Fig. 5b and paragraph 0038 teaches selectable listings [e.g. PROGRAM 1, PROGRAM 2, ...] [representations] corresponding to stored and public television on a program guide).

8. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hassel (2007/0033615), and further in view of Hoarty et al. (6,305,020).

Consider **claim 33**, Jerding'982, Jerding'616, and Hassel teaches the virtual tuner manages the plurality of applications by:

launching one or more of the plurality of applications to process at least one of the local and remote content (Jerdong'982 - Col 4: lines 67-14 teaches receiving user input selection from a plurality of available selectable link labels. The application is executed and presents the designated service to the user after the API calls are transferred from the SAM Fig.2, 29 and the operation system Fig.2, 23 to the desired application. Col 3: lines 19-27 teaches that the SAM Fig.2, 29 handles the initiation, activation of the application. Col 3: lines 28-35 teaches in a non-limiting example executing a tuning application to display video programming such as HBO and CNN); and

Jerdong'982, Jerding'616, and Hassel do not explicitly teach terminating one or more said applications when provision of the content is completed.

In an analogous art, Hoarty teaches terminating one or more applications when provision of the content is completed (Col 10: lines 11-17 teaches a program managing display of content. When outputting of

the content is over, the program follows the steps of call take down

[termination] as described in col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982, Jerding'616, and Hassel to terminate one or more applications when provision of the content is completed, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

9. **Claims 1, 2, 4-6, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Houghton et al (US 2005/0021609).

Consider **claim 1**, Jerding'982 teaches a method comprising:

outputting an Electronic Programming Guide (EPG) for display by a client (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services supported by the DHCT.

Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user), wherein:

the EPG includes a plurality of representations of a plurality of content (Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing

selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc);

the client includes a plurality of applications (Col 3: lines 36-48 teaches different applications Fig.2, 25 that can be executed on the client are watch TV, pay-per view, video-on-demand, etc. Col 7: lines 64-67 teaches an email application);

one or more said content is provided for output by a respective said application (col 5: lines 5-14 teaches after API calls are transferred to the desired application Fig.2, 25, the application executes and presents the designated service to the user on the display Fig.2, 21); and

the EPG is configured to form one or more events in response to user interaction with one or more said representations (Col 4: line 67 – col 5: line 7 teaches receiving user input selection of one of the plurality of selectable link labels and forming a C-based API call after selection); and

executing a virtual tuner on the client to manage execution of each said plurality of applications to provide respective said content in response to the events formed utilizing the EPG (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that

handles the applications. Col 7: lines 20-28; *This is applicable to all executable applications resident on the client*).

Jerding'982 teaches the DHCT maintaining tables for determining associated services, IDs, etc (Col 7: lines 28-30), but fails to explicitly teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Jerding'982s system to include utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Although Jerding'982 teaches television programming (Col 3: lines 28-35 teaches video programming such as HBO and CNN), Jerding'982 does not explicitly teach the content is television programming for receipt by the client over an Internet.

In an analogous art, Houghton teaches that the content is television programming for receipt by the client over an Internet (Paragraph 009 –

0010 teaches receiving web content over communications card Fig.4, 121.

The web content may be sports event or a continuous series of programming that is transmitted over the internet)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982 and Jerding'616 Jerding'616 to include at least one content is television programming for receipt by the client over an internet, as taught by Houghton, for the advantage of providing programming that might have otherwise been unavailable for which a broadcast network who has viewing rights, but decides not to broadcast the event (Houghton – paragraph 0010).

Consider **claim 2**, Jerding'982, Jerding'616, and Houghton teaches that the virtual tuner is further executed to manage a lifecycle of each said application (Jerding'982 - Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Consider **claim 4**, Jerding'982, Jerding'616, and Houghton teaches that the executing of the virtual tuner further comprises managing one or more windows (Jerding'982 - Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another

service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content); and

at least one said window is utilized to display the respective said content (Jerdig'982 - Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 5**, Jerding'982, Jerding'616, and Houghton teaches that the managing of the one or more windows includes displaying the at least one said window in a foreground of a display in response to one or more said events (Jerdig'982 - Col 7: line 40 – col 8: line 4 teaches displaying an underlying application in full screen mode and an email application overlaid on top [foreground] by the SAM Fig.2, 37 of the full screen mode application when a selectable link is activated [events]).

Consider **claim 6**, Jerding'982, Jerding'616, and Houghton teaches that content provided by a first said application is not compatible with a second said application (Jerdig'982 - Col 3: lines 44-48 teaches different

applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

Consider **claim 8**, Jerding'982, Jerding'616, and Houghton teaches one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 1 (Jerding'982 - Col 8: line 39 – col 9: line 14).

10. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Houghton et al (US 2005/0021609), and further in view of Hoarty et al. (6,305,020).

Consider **claim 3**, Jerding'982, Jerding'616, and Houghton teaches that the virtual tuner manages the execution by: launching one or more said applications for outputting said content selected utilizing the EPG (Jerding'982 - Col 4: lines 67-14 teaches receiving user input selection

from a plurality of available selectable link labels. The application is executed and presents the designated service to the user after the API calls are transferred from the SAM Fig.2, 29 and the operation system Fig.2, 23 to the desired application. Col 3: lines 19-27 teaches that the SAM Fig.2, 29 handles the initiation, activation of the application); and Jerding'982, Jerding'616, and Houghton do not explicitly teach terminating one or more said applications when the outputting is completed.

In an analogous art, Hoarty teaches terminating one or more applications when the outputting is completed (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down [termination] as described in col 9: lines 64-11).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982, Jerding'616, and Houghton to include terminating one or more applications when the outputting is completed, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

11. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) herein after referred to as Jerding'982 in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Houghton et al (US 2005/0021609), and further in view of Hassell et al (2007/0033615).

Consider **claim 7**, Jerding'982, Jerding'616, and Houghton teach that the plurality of content includes remote content available over the internet (Jerdong'982 - Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches that such content can be any internet web content), but does not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Jerding'982, Jerding'616, and Houghton to include local content available locally on the client, as taught by Hassell,

for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Lin whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 9:00AM-6:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571)272-7294.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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08/31/2007



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